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NBC's Radiology Adds Large Digital Sensor Panel

Penn's George D. Widener Hospital for Large Animals at New Bolton Center became the first hospital (human or animal) in the United States to use a portable digital radiography system with a 14"x17" digital sensor panel. The new equipment, installed in September, enables radiologists to radiograph skulls, necks, and thoracic and abdominal areas of horses and other large animals. The previously installed 9"x11" sensor panel permits digital radiographs of limbs or other small areas.

"This new digital sensor panel allows us to capture a large radiographic image in seconds," says **Dr. Alexia McKnight**, lecturer in Radiology at New Bolton Center. "If the image isn't positioned correctly, we can quickly repeat it. With film we had to wait for the developed image, which took time and often meant that the animal had to be re-sedated if a view needed to be repeated."

Dr. McKnight explains that digital radiography provides more detailed images than traditional films. Contrast is improved and

information is easier to interpret. This is because the software allows manipulating the raw data to bring into view more diagnostic information. "We can see subtle bony lesions much more clearly on digital radiographs," says Dr. McKnight. "Also, subtle fractures are visible. They don't show up on film, and we used to

images has also been a wonderful bonus of the digital system. It also enhances our referral capabilities because of the amount of detail we can capture through this technology."

The system also provides other efficiencies. Technicians no longer have to develop film and work with chemicals; the images are stored on



Conventional radiograph.



Digital radiograph.

use xerography, which required a significantly higher exposure. The digital system is much more efficient for us and better for the patients because we can perform our study much faster and with shorter sedation time. The ability to accurately measure angles and distances on the

a Picture Archiving and Communication System that is the size of a washing machine, so storage space needs are less. The system is also backed up daily to an off-site center in California.

The digital images can be retrieved quickly on computers throughout the hospital, enabling clinicians to view them in their offices. Dr. McKnight, the other radiologists, and the clinicians can review the images on special high-resolution grayscale monitors that are quite large. The images can be enlarged and the radiologist can zoom in on an area. Because of the incredible detail and digital archiving, the system makes it much easier for teaching students who are rotating through large animal radiology.

New Bolton Center's Field Service, the Emergency Service after hours, and the operating rooms still use conventional radiographs, but these are later digitized for interpretation and storage. Eventually, a large digital archive of radiographs will be available, making retrieval much easier for retrospective studies.

The purchase of the new, larger sensor panel and its computer was made possible by the Estate of Elizabeth Ernst Fosbinder, wife of the late Dr. Russell J. Fosbinder.

Term Chair Established for Special Species Medicine

In recognition of the prominence of the Special Species program here at Penn, ABAXIS, Inc., a medical products company, established the ABAXIS Term Chair for Special Species. This will support advanced research in diagnostics and treatment of special species. "Special species, particularly birds and reptiles, are presently the fastest-growing segment of veterinary practices," said Kenneth Aron, Ph.D., vice president of Research and Development at ABAXIS. "Because of the range and number of different avian and reptilian species, much research still remains to be carried out to optimize treatment options and decisions for many of these special species. At ABAXIS, we hope that by establishing a Chair solely dedicated to special species, we'll be participating in the commitment to bring improved diagnostics to this rapidly growing segment."

The Special Species Clinic at the Ryan Veterinary Hospital is a busy service, with more than 800 patient visits annually. The Clinic has its own ward and nurse practitioner as well as two clinicians. "The establishment of the ABAXIS Term Chair for Special Species is recognition of the growing importance of these pets," said **Gail Smith, V74**, chair of the School's Department of Clinical Studies—Philadelphia. "These patients require special care, and much needs to be learned about their diseases and treatment. This Term Chair will enable the faculty member who will hold it to conduct research and advance the field of special species medicine. We are grateful to ABAXIS for its generosity and foresight."

The School will conduct a search for the appointment and hopes to make an announcement in 2004.